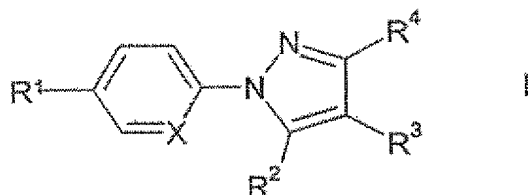


The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A compound of formula I



in which

R^1 denotes ~~(CH₂)_nHet1, or (CH₂)_nAr, or cycloalkyl having 3 to 7 C atoms,~~

Het1 is 4-pyridyl, thiophen-2-yl or thiophen-3-yl, which is unsubstituted or mono- or polysubstituted by CN, A and/or Hal.

R^2 denotes Het2 ~~(CH₂)_nHet2, (CH₂)_nAr, or cycloalkyl having 3 to 7 C atoms,~~

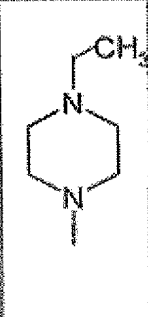
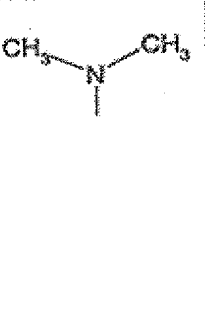
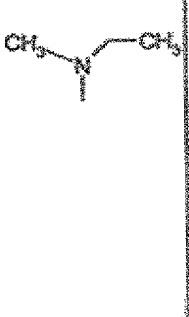

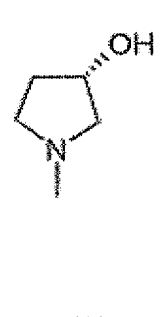
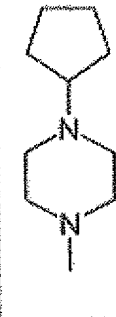
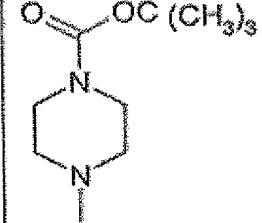
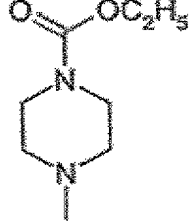
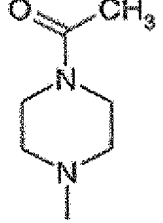
is 2- or 3-furanyl, which is unsubstituted or mono- or polysubstituted by A and/or Hal.

R^3, R^4 one of the radicals R^3 or R^4 denotes H, and the other of the radicals R^3 or R^4

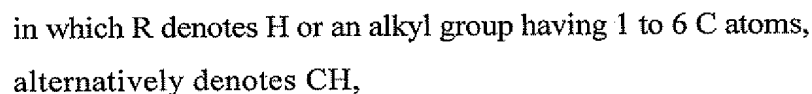
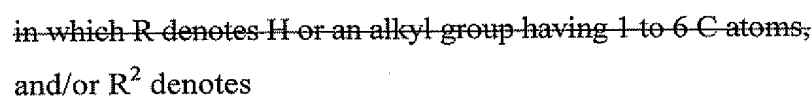
denotes ~~denote H,~~ (CH₂)_nCO₂R⁵, (CH₂)_nCOHet3, CHO, (CH₂)_nOR⁵, (CH₂)_nHet3, (CH₂)_nN(R⁵)₂, CH=N-OA, CH₂CH=N-OA, (CH₂)_nNHOA, (CH₂)_nN(R⁵)Het3, (CH₂)_nCH=N- Het3, (CH₂)_nOCOR⁵, (CH₂)_nN(R⁵)CH₂CH₂OR⁵, (CH₂)_nN(R⁵)CH₂CH₂OCF₃, (CH₂)_nN(R⁵)C(R⁵)HCOOR⁵, (CH₂)_nN(R⁵)CH₂CO Het3, (CH₂)_nN(R⁵)CH₂ Het3, (CH₂)_nN(R⁵)CH₂CH₂ Het3, (CH₂)_nN(R⁵)CH₂CH₂N(R⁵)CH₂COOR⁵, (CH₂)_nN(R⁵)CH₂CH₂N(R⁵)₂, CH=CHCOOR⁵, CH=CHCH₂NR⁵ Het3, CH=CHCH₂N(R⁵)₂, CH=CHCH₂OR⁵ or (CH₂)_nN(R⁵)Ar,

~~with the proviso that in each case one of the radicals R^3 or R^4 denotes H,~~

Het3 is 1-piperidyl, 1-piperazyl, 1-(4-methyl)piperazyl, 4-methylpiperazin-1-ylamine, 1-pyrrolidinyl, 1-pyrazolidinyl, 1-(2-methyl)pyrazolidinyl, 1-imidazolidinyl or 1-(3-methyl)imidazolidinyl or 4-pyridyl, which may be unsubstituted or substituted by one or more CN groups, 2- or 4-pyridazyl, 2-, 4- or 5-pyrimidyl, or 2- or 3-pyrazinyl or one of the following groups

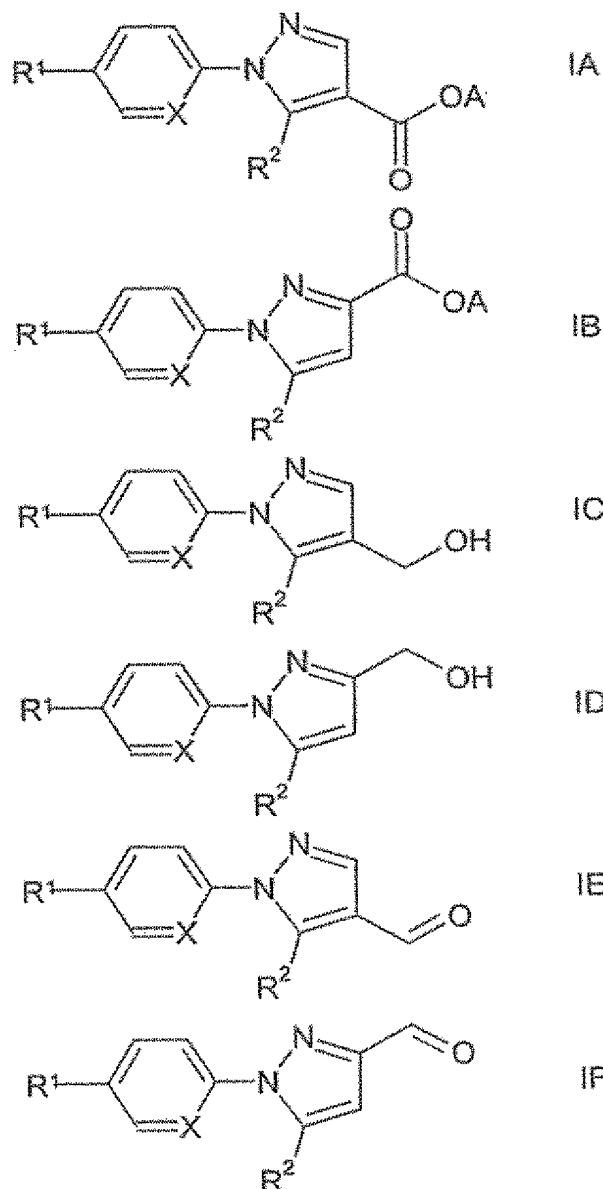
- R^5 denotes H or A,
A denotes straight-chain or branched alkyl or alkoxy having 1 to 10 C atoms, alkenyl or alkoxyalkyl having 2 to 10 C atoms,
~~Het denotes a saturated, unsaturated or aromatic mono- or bicyclic heterocyclic or linear or branched organic radical containing one or more heteroatoms which is unsubstituted or mono- or polysubstituted by A and/or Hal,~~
Ar denotes a phenyl radical which is unsubstituted or mono- or polysubstituted by A and/or Hal, OR^5 , $OOCR^5$, $COOR^5$, $CON(R^5)_2$, CN, NO_2 , NH_2 , $NHCOR^5$, CF_3 or SO_2CH_3 ,
n denotes 0, 1, 2, 3, 4 or 5,
Hal denotes F, Cl, Br or I, and
X denotes N, or
in the case where R^1 denotes one of the following groups



or an enantiomer, racemate, or a mixture of enantiomers thereof,
or a pharmaceutically acceptable salt thereof.

2. (Previously Presented) A compound of formula I according to Claim 1, in which R¹ denotes phenyl, 2-, 3- or 4-cyanophenyl, 2-, 3- or 4-fluorophenyl, 2-, 3- or 4-methyl-, -ethyl-, -n-propyl- or -n-butylphenyl, 2,3-, 2,4-, 2,5-, 2,6-, 3,4-, 3,5- or 3,6-difluoro-, -dichloro- or -dicyanophenyl, 3,4,5-trifluorophenyl, 3,4,5-trimethoxy- or -triethoxyphenyl, thiophen-2-yl or thiophen-3-yl.

3. (Previously Presented) A compound of formula I according to claim 1, in which R^3 denotes H.
4. (Previously Presented) A compound of formula I according to claim 1, in which R^4 denotes H.
5. (Cancelled)
6. (Previously Presented) A compound of formula I according to claim 1, in which X denotes N.
7. (Currently Amended) A compound according to claim 1, which is of formula IA, IB, IC, ID, IE or IF



in which

R^1 , R^2 , X and A are as defined for the compound of formula I, $(CH_2)_nHet$,

$(CH_2)_nAr$, or cycloalkyl having 3 to 7 C atoms,

R^2 ——— denotes $(CH_2)_nHet$, $(CH_2)_nAr$, or cycloalkyl having 3 to 7 C atoms,

A ——— denotes straight chain or branched alkyl or alkoxy having 1 to 10 C atoms,
alkenyl or alkoxyalkyl having 2 to 10 C atoms,

Het ——— denotes a saturated, unsaturated or aromatic mono- or bicyclic heterocyclic or
linear or branched organic radical containing one or more heteroatoms which
is unsubstituted or mono- or polysubstituted by A and/or Hal,

Ar ——— denotes a phenyl radical which is unsubstituted or mono- or

polysubstituted by A and/or Hal, OR^5 , $OOOR^5$, $COOR^5$, $CON(R^5)_2$, CN ,
 NO_2 , NH_2 , $NHCOR^5$, CF_3 or SO_2CH_3 ;

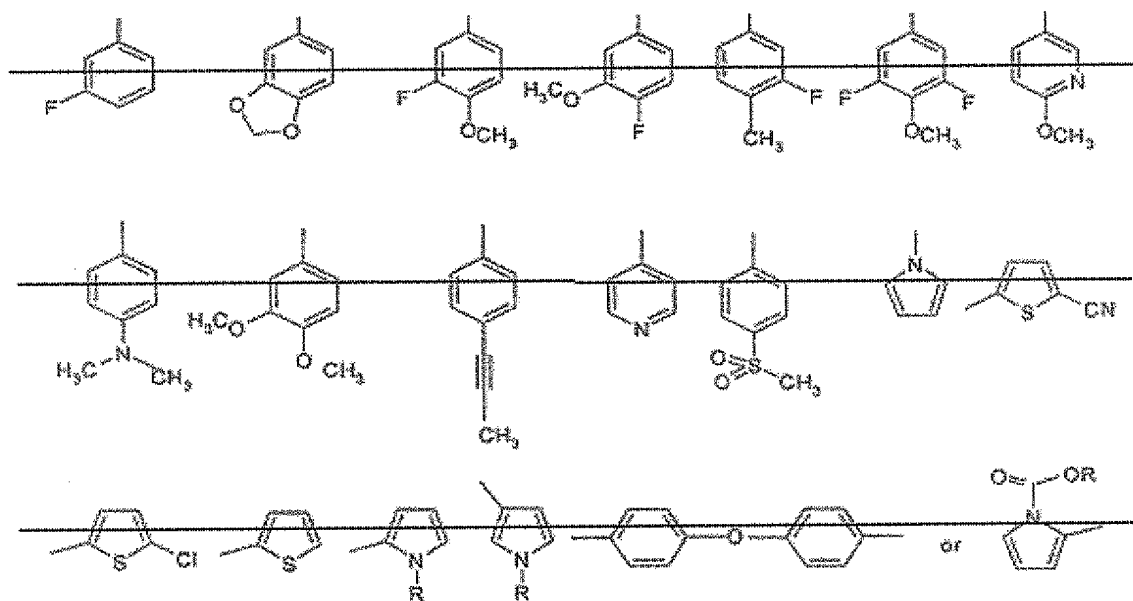
R^5 ————— denotes H or A;

n ————— denotes 0, 1, 2, 3, 4 or 5;

Hal ————— denotes F, Cl, Br or I, and

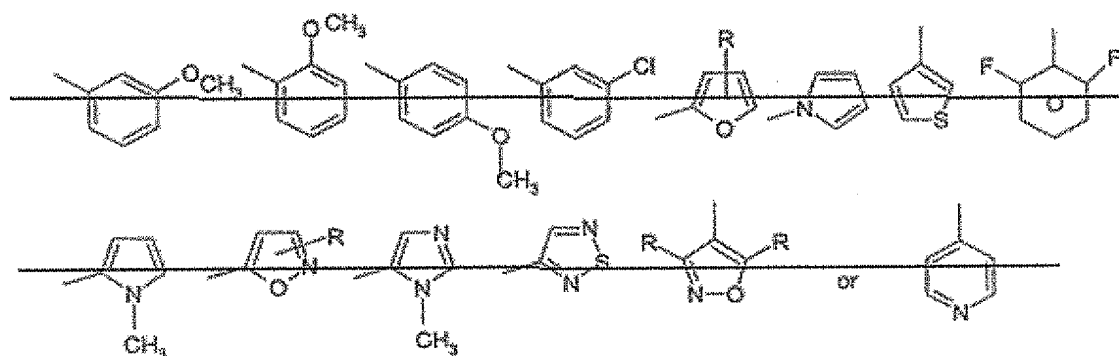
X ————— denotes N, or

————— in the case where R^1 denotes



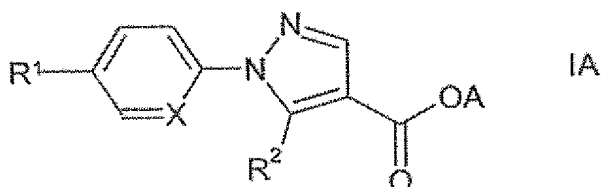
in which R denotes H or an alkyl group having 1 to 6 C atoms;

and/or R^2 denotes

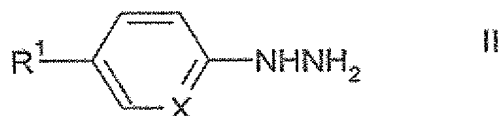


in which R denotes H or an alkyl group having 1 to 6 C atoms,
alternatively denotes CH₃,
or a salt thereof.

8. (Previously Presented) A process for preparing a compound of
formula IA according to claim 7



comprising reacting a compound of formula II



or an acid-addition salt thereof, in which

R¹ and X have the meanings indicated for the compound of formula IA,

with a compound of formula III



in which

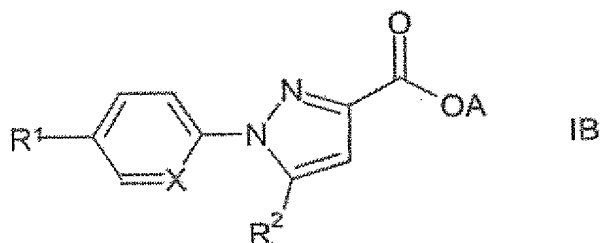
A and R² have the meanings indicated for the compound of formula IA,

and/or

a basic compound of formula IA is converted into one of its salts by treatment with an acid.

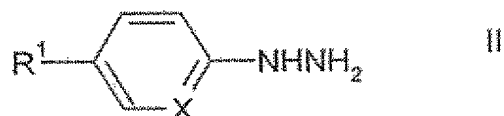
9. (Previously Presented) A process for preparing a compound of

formula IB according to claim 7



in which R^1 , R^2 , R^3 , R^4 , X and A have the meanings indicated for the compound of formula IB,

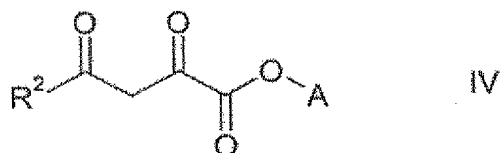
comprising reacting a compound of formula II



or an acid-addition salt thereof, in which

R^1 and X have the meanings indicated for the compound of formula IB,

with a compound of formula IV



in which

A and R^2 have the meanings indicated for the compound of formula IB,

and/or

a basic compound of formula IB is converted into one of its salts by treatment with an acid.

10. (Previously Presented) A pharmaceutical composition comprising a compound of formula I according to claim 1 and a pharmaceutically acceptable carrier.

11. (Previously Presented) A method for the treatment of a disease which can be influenced by the binding of a compound of formula I to 5 HT receptors, comprising administering to a subject in need thereof an effective amount of a pharmaceutical

composition according to claim 10.

12. (Previously Presented) A method for antagonizing a 5-HT receptor, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

13. (Previously Presented) A method for antagonizing a 5-HT_{2A} receptor, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

14. (Cancelled)

15. (Previously Presented) A process for preparing a pharmaceutical composition according to claim 10, comprising mixing together a compound of formula I and a pharmaceutically acceptable carrier.

16. (Currently Amended) A method for the treatment of psychoses, a neurological disorder, amyotrophic lateral sclerosis, eating disorder, bulimia, anorexia nervosa, premenstrual syndrome and/or for positively influencing obsessive compulsive disorder, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

17-22. (Cancelled)

23. (Currently Amended) A compound of claim 1, in which
R¹ denotes Het₁ or Ar;
R² denotes Het or Ar;
R³, R⁴ denote H, (CH₂)_nCO₂R⁵, CH=N-OA, CH₂CH=N-OA, (CH₂)_nNHOA,
(CH₂)_nN(R⁵)Het, (CH₂)_nCH=N-Het, (CH₂)_nOCOR⁵, (CH₂)_nN(R⁵)CH₂CH₂OR⁵,
(CH₂)_nN(R⁵)CH₂CH₂OCF₃, (CH₂)_nN(R⁵)C(R⁵)HCOOR⁵,
(CH₂)_nN(R⁵)CH₂COHet, (CH₂)_nN(R⁵)CH₂Het, (CH₂)_nN(R⁵)CH₂CH₂Het,
(CH₂)_nN(R⁵)CH₂CH₂N(R⁵)CH₂COOR⁵, (CH₂)_nN(R⁵)CH₂CH₂N(R⁵)₂,
CH=CHCOOR⁵, CH=CHCH₂NR⁵Het, CH=CHCH₂N(R⁵)₂, CH=CHCH₂OR⁵ or

$(CH_2)_n N(R^5)Ar$, with the proviso that in each case one of the radicals R^3 or R^4 denotes H,

R^5 ————— denotes H or A,

A ————— denotes straight chain or branched alkyl or alkoxy having 1 to 10 C atoms;
alkenyl or alkoxyalkyl having 2 to 10 C atoms,

Het ————— denotes a saturated, unsaturated or aromatic mono- or bicyclic heterocyclic or
linear or branched organic radical containing one or more heteroatoms which
is unsubstituted or mono- or polysubstituted by A and/or Hal,

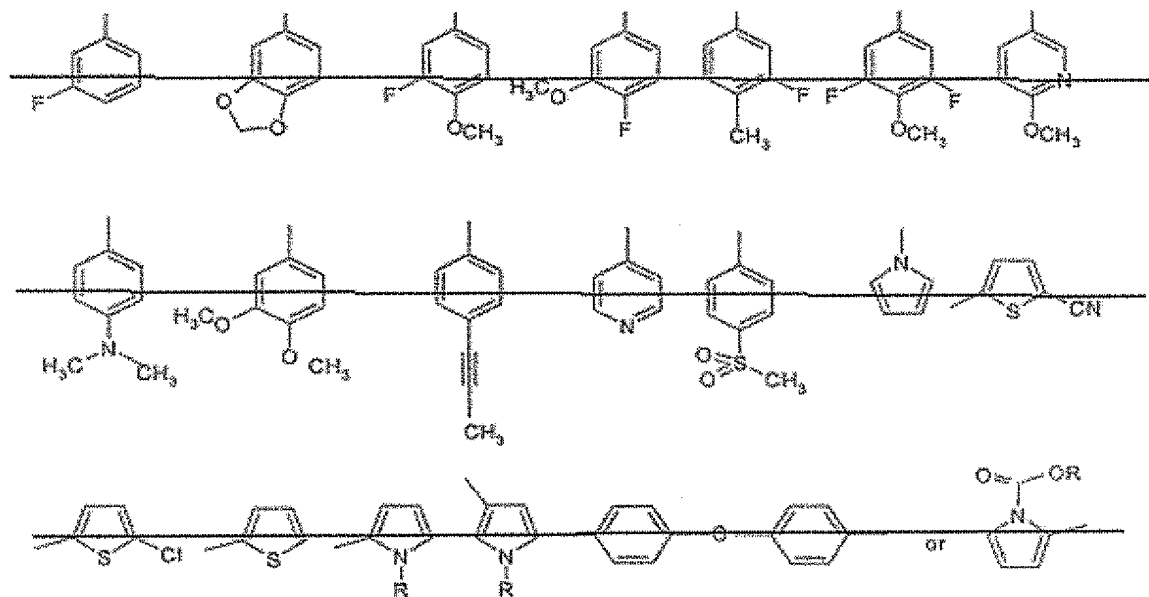
Ar ————— denotes a phenyl radical which is unsubstituted or mono- or
polysubstituted by A and/or Hal, OR^5 , $OO CR^5$, $COOR^5$, $CON(R^5)_2$, CN,
 NO_2 , NH_2 , $NHCO R^5$, CF_3 or SO_2CH_3 ,

n ————— denotes 0, 1, 2 or 3,

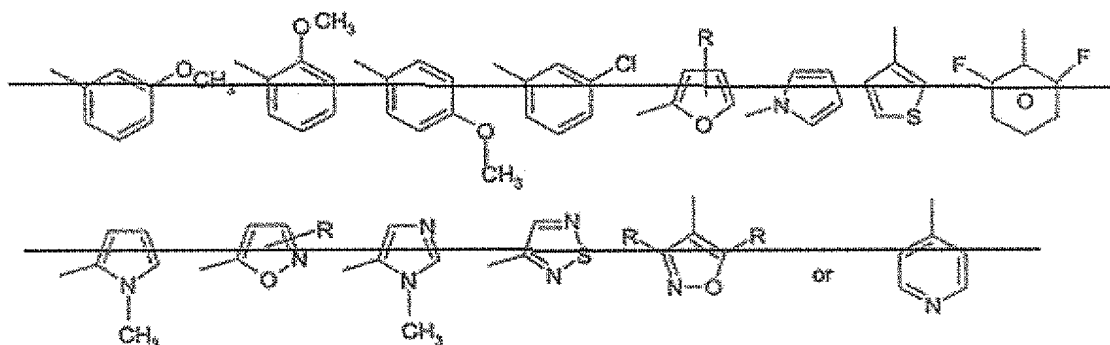
Hal ————— denotes F, Cl, Br or I, and

X ————— denotes N, or

————— in the case where R^4 denotes



in which R denotes H or an alkyl group having 1 to 6 C atoms,
and/or R^2 denotes



in which R denotes H or an alkyl group having 1 to 6 C atoms;
alternatively denotes CH.

24-27. (Cancelled)

28. (Previously Presented) A method for antagonizing a 5-HT_{2A} receptor in vitro, comprising administering to said 5-HT_{2A} receptor an effective amount of a compound according to claim 1.

29. (Currently Amended) A method for the treatment of psychoses, amyotrophic lateral sclerosis, bulimia, anorexia nervosa, premenstrual syndrome and/or for positively influencing obsessive compulsive disorder, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

30. (New) A method for the treatment of amyotrophic lateral sclerosis, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

31. (New) A method for the treatment of bulimia, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

32. (New) A method for the treatment of anorexia nervosa, comprising

administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

33. (New) A method for the treatment of premenstrual syndrome, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

34. (New) A method for positively influencing obsessive compulsive disorder, comprising administering to a subject in need thereof an effective amount of a pharmaceutical composition according to claim 10.

35. (New) A compound of formula I according to Claim 1, in which one of the radicals R^3 or R^4 denotes H and the other of the radicals R^3 or R^4 denotes $(CH_2)_nCO_2R^5$, $(CH_2)_nCOHet3$, $(CH_2)_nHet3$, $(CH_2)_nN(R^5)Het3$, $(CH_2)_nCH=N-Het3$, $(CH_2)_nN(R^5)CH_2CH_2OR^5$, $(CH_2)_nN(R^5)CH_2CH_2OCF_3$, $(CH_2)_nN(R^5)C(R^5)HCOOR^5$, $(CH_2)_nN(R^5)CH_2COHet3$, $(CH_2)_nN(R^5)CH_2Het3$, $(CH_2)_nN(R^5)CH_2CH_2Het3$, $(CH_2)_nN(R^5)CH_2CH_2N(R^5)CH_2COOR^5$, $(CH_2)_nN(R^5)CH_2CH_2N(R^5)_2$, or $(CH_2)_nN(R^5)Ar$, wherein n is 1, 2, 3, 4 or 5.

36. (New) A compound of formula I according to Claim 1, in which one of the radicals R^3 or R^4 denotes H and the other of the radicals R^3 or R^4 denotes $(CH_2)_nHet3$, wherein n is 1, 2, 3, 4 or 5.